

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (original) Apparatus for decoding packetized program information from a first source to provide a program guide, comprising:

a processor for acquiring ancillary and program guide information in said packetized program information, said ancillary information including,

(a) channel mapping information enabling a user of said decoding apparatus to select between different groups of broadcast services collated by area, and

(b) data for collating program guide information associated with said broadcast services by scheduled time of broadcast, and

a data collator for collating said program guide information associated with said broadcast services using said ancillary information; and

a display processor for processing said collated program guide information for display.

2. (original) Apparatus according to claim 1, wherein
said area comprises at least one of (a) a geographic area, (b) an area served by a satellite, terrestrial, or cable broadcaster, and (c) a market area of a service provider.

3. (original) Apparatus according to claim 1, wherein
said channel mapping information comprises at least one of (a) a channel information map associating particular broadcast channels with particular areas, and (b) a service information map associating particular services with particular areas.

4. (original) Apparatus according to claim 3, wherein said services comprise at least two of

(a) video channels, (b) audio channels, (c) Internet service, (d) phone or fax service, (e) Wide Area Network service.

5. (original) Apparatus according to claim 1, wherein
said channel mapping information associates particular broadcast channels with a region identification designation.

6. (original) Apparatus according to claim 5, wherein
said region identification designation comprises at least one of (a) a zip code, (b) a telephone area code, and (c) another region identification code, and
said data collator collates program guide information by comparing said region identification designation with a pre—stored region identification designation of said apparatus.

7. (original) Apparatus according to claim 1, wherein
said ancillary information includes objects associated with said program guide information and includes information partitioned into tables, and
said processor acquires data for collating said tables and objects by area.

8. (original) Apparatus according to claim 7, wherein
said data for collating said tables and objects includes region identification designations for associating objects with regions that are different to table regions, and
said data collator collates said objects into regions different to regions of said tables.

9. (original) Apparatus according to claim 7, wherein
said object comprises at least one of (a) a video segment, (b) an audio segment,
(c) text, (d) an icon representing a user selectable item for display, (e) an HTML or
SGML document (f) a menu of selectable items, (g) an image window for presentation
within an encompassing image, and (h) an image window for initiating a multimedia
function.

10. (original) Apparatus according to claim 1, wherein
said ancillary information further includes acquisition information for use in
acquiring said ancillary information from a second source different to said first source,
and
said acquisition information includes one of (a) an Internet URL, (b) an Internet
IP address, (c) an Email address, and (d) a telephone/fax/videophone number.

11. (original) Apparatus according to claim 1 , wherein
said channel mapping information is formed in accordance with MPEG protocol
and uses at least one data field selected from, (a) a table_id_extension field, (b) a
carouselId field, and (c) a User defined private data field.

12. (original) Apparatus according to claim 1 , wherein
said data collator collates said program guide information in response to a User
selection input to provide a program guide selected from at least two available program
guides associated with different areas.

13. (original) Apparatus according to claim 1, wherein
said ancillary information is partitioned by area at the transport protocol level
enabling filtering of said ancillary information by area prior to post-transport processing.

14. (original) Apparatus according to claim 1, wherein
said ancillary information is partitioned by area enabling different ancillary
information elements to targeted for decoding in corresponding different areas.

15. (original) Apparatus for decoding packetized program information from a
first source to provide a program guide, comprising:

a processor for acquiring ancillary and program guide information in said
packetized program information, said ancillary information including,

(a) channel mapping information enabling a user of said decoding
apparatus to select between different groups of broadcast services collated by area, and

(b) data for collating program guide information associated with said
broadcast services by scheduled time of broadcast, and

a data collator for collating program guide information in response to a User
selection input to provide a program guide selected from at least two available program
guides associated with different areas; and

a display processor for processing said collated program guide information for
display.

16. (original) A storage medium containing digital data representing video
information comprising:

packetized program information representing a video program; and

ancillary information including ancillary and program guide information in said
packetized program information, said ancillary information including,

(a) channel mapping information suitable for enabling a user of a
reproduction device for playing said digital data to be able select between different
groups of broadcast services and associated tables and objects collated by area, and

(b) data for collating program guide information associated with said
broadcast services, and

information for associating said tables and objects with program guide information items associated with said broadcast services.

17. (original) Apparatus according to claim 16, wherein said channel mapping information includes a program information map linking said objects with program guide information items associated with programs broadcast on particular broadcast channels.

18. (original) A method for forming program guide information to be suitable for processing in a decoder to provide different program guides displaying different service listings in correspondingly different regions, comprising the steps of:

forming ancillary information including,

(a) channel mapping information enabling a user of said decoding apparatus to select between different groups of broadcast services collated by area, and

(b) data for collating program guide information associated with said broadcast services by scheduled time of broadcast, and

forming linking information associating programs with said broadcast services; and

incorporating said ancillary information and said linking information into packetized data for output to a transmission channel.

19. (original) A method according to claim 18, wherein said area comprises at least one of (a) a geographic area, (b) an area served by a satellite, terrestrial, or cable broadcaster, and (c) a market area of a service provider.

20. (original) A method according to claim 18, wherein
said channel mapping information comprises at least one of (a) a channel
information map associating particular broadcast channels with particular areas, and (b) a
service information map associating particular services with particular areas.

21. (original) A method according to claim 18, wherein
said channel mapping information associates particular broadcast channels with a
region identification designation.

22. (original) A method according to claim 21, wherein
said region identification designation comprises at least one of (a) a zip code, (b)
a telephone area code, and (c) another region identification code.

23. (original) A method according to claim 18, including the step of
forming said ancillary information into tables partitioned based on area and
scheduled broadcast time.

24. (original) A method according to claim 18, wherein
said ancillary information includes an object associated with said program guide
information.

25. (original) A method according to claim 24, wherein
said object comprises at least one of (a) a video segment, (b) an audio segment,
(c) text, (d) an icon representing a user selectable item for display, (e) an HTML or
SGML document (f) a menu of selectable items, (g) an image window for presentation
within an encompassing image, and (h) an image window for initiating a multimedia
function.

26. (original) A method according to claim 18, including the step of forming ancillary information partitioned into tables and including data for collating objects and said tables, and including region identification designations for associating objects with regions that are different to table regions.

27. (original) A method according to claim 18, including the step of forming said ancillary information to include information associating a particular area with at least one particular decoder for decoding said ancillary information.

28. (original) A method according to claim 27, wherein said particular decoder is associated with said particular area using a unique decoder identification code.

29. (original) A method according to claim 27, including the step of dynamically updating said information associating a particular area with at least one particular decoder to associate a different area with said particular decoder.

30. (original) A method according to claim 18, wherein said channel mapping information is formed in accordance with MPEG protocol and uses at least one data field selected from, (a) a table_id_extension field, (b) a carousel_id field, and (c) a User defined private data field.

31. (original) A method for decoding packetized program information from a first source to provide a program guide, comprising the steps of:

acquiring ancillary and program guide information in said packetized program information, said ancillary information including,

(a) channel mapping information enabling a user of said decoding apparatus to select between different groups of broadcast services collated by area, and

(b) data for collating program guide information associated with said broadcast services by scheduled time of broadcast, and
collating said program guide information associated with said broadcast services using said ancillary information; and
processing said collated program guide information for display.

32. (original) A method for decoding packetized program information from a first source to provide a program guide, comprising the steps of:

acquiring ancillary and program guide information in said packetized program information, said ancillary information including,

(a) channel mapping information enabling a user of said decoding apparatus to select between different groups of broadcast services collated by area, and

(b) data for collating program guide information associated with said broadcast services by scheduled time of broadcast, and
collating program guide information in response to a User selection input to provide a program guide selected from at least two available program guides associated with different areas; and

processing said collated program guide information for display.